Woodland Health

A column focusing on topics that might limit the health, vigor and productivity of our private or public woodlands

Coordinated by Mark Whitmore

Woodlot Management and the Emerald Ash Borer

By Mark Whitmore and Pete Smallidge

Woodlot owners in New York will at some time be dealing with the Emerald Ash Borer (EAB), *Agrilus planipennis*. In the last issue of the New York Forest Owner we provided an update on the EAB situation in New York; please refer to this article for background information. In this article we will focus specifically on what you can be doing as a woodlot owner to prepare for the EAB.

One of the most important things to remember is that EAB is not currently widespread in New York so most woodlot owners have time to plan ahead and benefit from additional ash volume growth. Indeed, if the state's efforts to "Slow the Spread" are successful we will have even more time to develop and implement management strategies. One thing to consider is that every year your woodlot is EAB free the ash volume is increasing and in some stands this can be significant. Right now we really have no good guesses about how fast EAB will be moving through the state. However, if people stop moving infested firewood, many of the states' woodlot owners will have perhaps several more years before the EAB arrives in their neighborhood. So cool your heels if you've been thinking about liquidating your ashets and start planning ahead to minimize EAB impacts.

The specific course of action a landowner selects will depend on their objectives, abundance and maturity of ash in their woodland, the abundance and quality of other species in the woodland, owner's geographic proximity to EAB infestation, the availability of markets, and owner's ability to complete or coordinate work tasks in the woods.

The attitudes and resources of the private forest owner will influence management decisions in response to EAB. Forest owners who seek productive forests may want to be proactive to capture value while markets are favorable but should be mindful of lost volume if EAB is not near. Forest owners who will be able to personally utilize ash or sell in nearby markets may want to wait for the insect to arrive and harvest at that time. Owners who desire minimal manipulation of their woods similarly may wait and then respond to manage effects that may cascade from ash mortality, such as invasive plants, less desirable regeneration, loss of diversity or reduced forest stocking. Each owner needs to personally assess their objectives, and consult with forestry professionals attuned to the owner's objectives, to guide their strategy and timing for a response to EAB.

Effective management of forests in anticipation of EAB requires knowledge of forest characteristics such as the variety of other desired tree species, presence of invasive plants, forest density, tree age and average tree diameter. Most forest owners should work with a forester to acquire this information. Information on how to select a forester is available through Cornell University Cooperative Extension and at *www.ForestConnect.info*. The NYS Department of Environmental Conservation (DEC) provides free Stewardship management planning advice to forest owners upon their re-

In young stands with mixed species, consider cutting some ash that shade desired species to promote species diversity and reduce ash abundance.

Web Resources for EAB Information

General information and links for EAB and other Invasive Species in New York. NY Community EAB Planning Workbook is found here.	http://www.nyis.info
National EAB website with biology, management, and many links to work in other states	http://www.emeraldashborer.info
NYS DEC Emerald Ash Borer website. Many resources and maps specific to New York	http://www.dec.ny.gov/animals/7253.html
EAB quarantine and firewood regulations for New York State	http://www.dec.ny.gov/animals/47761.html
CCE's Forest Connect web seminar and information portal for woodlot owners	http://www2.dnr.cornell.edu/ext/forestconnect/web.htm

quest. Contact the local DEC forestry office to obtain assistance from a DEC Forester. DEC also maintains a list of Cooperating Foresters, foresters in the private sector who provide services to forest owners.

Because the arrival of EAB is imminent, and there are no known methods of control on an area-wide basis, forest owners should assess their interest in managing impacts and, if appropriate, capturing the value that exists in ash on their property. Young, fully forested areas but with low abundance of ash stems will experience minimal ecological impact from EAB. Forests that are increasingly mature or having greater abundance of ash will be more dramatically affected when the insect arrives. Owners should strive for a mixture of species and forests that are adequately stocked for optimum growth. Stocking refers to the number and size of trees per acre; full or overstocked woodlots have reduced growth of trees and an increased potential of natural mortality. The natural mortality isn't controlled, and in some cases the ash may survive and future desired tree species may not.

In young forests and forests having low densities of ash, owners may benefit from non- or pre-commercial thinning to reduce the density of ash in favor of alternative desired species. This will shift growth to other desirable species and ensure they are thrifty if and when ash mortality occurs. In areas being planned for planting, species other than ash that are suited to soil conditions should be used. In forests that are heavily stocked with ash a non- or pre-commercial thinning could be used in one or two steps to open the stand gradually and encourage regeneration of desirable species without opening the stand up too much and thereby encouraging invasives.

In maturing forests, where the average tree is 12 inches diameter or larger, owners should evaluate their desire to capture any value that exists in ash. However, owners should strongly avoid the temptation for unnecessarily harvesting other high value trees that may serve as an important seed source to restock the forest following the death or removal of ash. Management in mature stands with abundant ash may seek to establish regeneration of other species in anticipation of EAB's arrival. In woodlands with abundant ash, this management strategy will result in a dramatic visual change. Owners should carefully consider their ownership goals and all management options. Complete liquidation of ash from a woodland is not recommended. If there are no ash left in the woods we will not have the chance to

continued on page 16

find that one rare individual that may be resistant to EAB.

Markets for ash in New York have remained remarkably resilient despite the implementation of quarantine regulation over large parts of the state and the flood of ash into the marketplace resulting from panic selling. This is largely because the regulating agencies, NYS Department of Agriculture and Markets and USDA APHIS, have been proactive with education and implementation of regulations that work with industry to enable commerce in a responsible manner.

When forests are disturbed through natural processes or management activities, they experience some type of change. Forests typically display predictable patterns of response, depending on local condition, existing interfering vegetation, current deer populations, and the type of disturbance. Specific conditions or actions that might inhibit the development of healthy and ecologically functional forests following EAB include: the spread of invasive plants that compete with desirable plants, deer browsing that reduces desirable species, logging disturbance without attention to water quality best management practices, high-grade (diameter limit) harvests that remove all or most of the valuable trees prior to effective forest regeneration, damage to the root systems or stems of residual trees during logging, or removal of desired trees needed for seed production.

Lastly, now is the time to begin planning for the worst case scenario where the vast majority of our ash is killed. If we do nothing our genetic resources for possibly reintroducing ash into our future forests will be minimal. We should be collecting seed and preserving it now, before the EAB takes this resource away. There is a National Ash Tree Seed Collection Initiative by the USDA to conserve ash seed and information can be found at: *http://www.nsl.fs.fed.us/geneticconservation_ash.html*

Cornell University Cooperative Extension recommends these steps for private forest owners:

1. Work with professionals to evaluate your need and desire to manage the impact and extent of mortality associated with EAB relative to your ownership objectives. Your ownership objectives influence the following recommendations. Be calm and deliberate in your decision making.
2. Determine the current status of EAB in New York by checking the DEC website and identify any revisions to management recommendations. EAB status may change more than once each year. Consider geographic location and the need for timely actions.
3. Assess the abundance and age of ash in your forest. Consult with a forester to learn how ash abundance in your woodlands, relative to other species, will be affected by the potential complete loss of ash.
4. In young forests or those that have low ash density, you could harvest or kill the ash that compete (shade) with other desired trees. This will retain some ash that are not competing and will ensure that a mixture of species is thriving when the EAB arrives and affects your forest.
5. In mature forests and those with high densities of ash, identify potential markets and harvest ash trees to capture the best value. Avoid the temptation to include other species in the harvest to make the harvest viable. Retain vigorous and dominant stems of other species to form the remaining and future forest. The arrival of EAB into NY has resulted in quarantines but markets have remained robust and agencies are working hard to minimize any disruption of commerce.
6. Call Before Your Cut: Consult with a forester, DEC or Cooperating Forester, prior to making decisions to cut or not to cut.

For more EAB Information please refer to the table on the previous page.

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